

THE ROCKEFELLER INSTITUTE

NEW YORK 21, NEW YORK

June 4, 1959

Dr. Joshua Lederberg
Professor of Genetics
Stanford University
Stanford, California

Dear Dr. Lederberg:

I would like to express my appreciation of your own interest and the vigorous efforts you have made to stir up the interest of others in biological aspects of "space science". I am especially appreciative of the assistance you have given to the Space Science Board in the matter of contamination of extraterrestrial objects.

As you probably know last summer Dr. Bronk asked me to serve as a member of the Space Science Board, for the area of biology. Most of the relevant fields of work are rather far from my own specialty, and I must rely on enlisting the advice and help of interested colleagues. Lloyd Berkner, chairman of the Board, asked each member to form a committee to assist in dealing with matters in his assigned area. The Bioscience Committee (Committee 11 of the SSB) is a small group of seven besides myself, including Dr. S.S. Stevens who represents on the Board the field of psychology. We hope to enlarge this group somewhat as we are able to persuade interested colleagues to help us. Ed Tatum is one of our members. I

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would very much like to have you join this committee, so that we may work together more effectively. I hasten to add that we are all allergic to unnecessary committee work, and share your own well known disinclination to travel. Most of our work gets done by correspondence or phone calls. We have met only once since the committee formed last summer. We would not expect you to make special trips to attend future meetings that we might have to call.

If you can be persuaded to join our committee, it would, I believe, make your formal relations with the Space Science Board a little more convenient. It would be possible for you to make use of the Board's Secretariat, and be reimbursed for expenses you might incur in connection with the very interesting meetings of your "Westex" group, including their travel expenses to your meetings and your own incidental expenses in these activities. There would be limitations, of course, but I believe that the arrangements could be very flexible and liberal, at least until your own proposals for direct support from one of the funding agencies become activated. We would hope that you would continue your activities in the field according to your interests, and take initiative in extending them in any direction you see fit. Special arrangements that may call for assistance from the Board may be made through me, if I can

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be of help, or directly through the Board Secretariat. Dr. G.A. Derbyshire has cognizance of our committee's activities. I hope that this formalization of our relations will be acceptable to you, and that we may continue to have your advice and assistance, in a measure increased according to your inclination, in this interesting new development of science.

I should perhaps add to this already lengthy letter some remarks about the committee's particular interests and activities. We have agreed to restrict our attention to the more strictly "basic" scientific problems of "space biology" (and psychology, where that comes in). In particular we have not concerned ourselves very much with problems associated with the "Man in Space" program. Many of these problems are engineering matters, and the active groups of professionals more than cover this aspect of applied biology and many of the related basic fields. Perhaps we should enlarge our group to include ^{additional} ~~some~~ competent physiologists who would take an active interest in sound work in this area. Howard Curtis and Lee Farr, both of Brookhaven, have some interest in this area, especially in matters relating to radiation.

Dr. Otto Schmitt is a member of our committee, and is an enthusiast for satellite experiments on various biological problems. Many of us, I am afraid, are somewhat skeptical of

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the far-reaching significance to fundamental biology of some of the proposed experiments. But we are willing to work to provide opportunity for any serious and competent worker to get his experiment backed.

Like yourself, all of us are extremely interested in the problem of extraterrestrial life. Several of our committee met with Bruno Rossi's "Eastex" group last December. But none of us has been as active as you in actually doing something about this exciting new field. I believe our most urgent problem is to convince our biologist colleagues who might have something to contribute that the intimate exploration of the Moon and the near planets is a very real possibility for the very near future, and that we actually have it within our power to find out whether life forms exist outside the Earth, and if so what they are like. We must stimulate more groups like "Eastex" and "Westex".

We share your concern, of course, about the scientific dangers of biological (and chemical) contamination of the Earth's near neighbors. Our greatest concern naturally is about Mars, and surely Venus too, about which so little is known. I think you have persuaded us that it is necessary to treat the Moon's surface with equal caution, until we can be certain that contamination

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would do no harm. It may be hard to make this stick in some quarters, but we must try.

Your willingness to help set up a program for the decontamination of space vehicles designed to reach the Moon and planets is much appreciated. I hope you will continue to work in this direction, as soon as you have caught your breath after your European trip. Please advise us of what we should do to help, so the program can be hastened.

Sincerely yours,

H. K. Hartline

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